



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/941,537	08/29/2001	Jong Chen	67,200-477	4317

7590 11/28/2003
TUNG & ASSOCIATES
838 W.Long Lake Road, Suite 120
Bloomfield Hills, MI 48302

EXAMINER
RUGGLES, JOHN S

ART UNIT PAPER NUMBER

1756

DATE MAILED: 11/28/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Advisory Action

Application No.

09/941,537

Applicant(s)

CHEN ET AL.

Examiner

John Ruggles

Art Unit

1756

--The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

THE REPLY FILED 10 November 2003 FAILS TO PLACE THIS APPLICATION IN CONDITION FOR ALLOWANCE. Therefore, further action by the applicant is required to avoid abandonment of this application. A proper reply to a final rejection under 37 CFR 1.113 may only be either: (1) a timely filed amendment which places the application in condition for allowance; (2) a timely filed Notice of Appeal (with appeal fee); or (3) a timely filed Request for Continued Examination (RCE) in compliance with 37 CFR 1.114.

PERIOD FOR REPLY [check either a) or b)]

- a) ☒ The period for reply expires 3 months from the mailing date of the final rejection.
- b) ☐ The period for reply expires on: (1) the mailing date of this Advisory Action, or (2) the date set forth in the final rejection, whichever is later. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of the final rejection. ONLY CHECK THIS BOX WHEN THE FIRST REPLY WAS FILED WITHIN TWO MONTHS OF THE FINAL REJECTION. See MPEP 706.07(f).

Extensions of time may be obtained under 37 CFR 1.136(a). The date on which the petition under 37 CFR 1.136(a) and the appropriate extension fee have been filed is the date for purposes of determining the period of extension and the corresponding amount of the fee. The appropriate extension fee under 37 CFR 1.17(a) is calculated from: (1) the expiration date of the shortened statutory period for reply originally set in the final Office action; or (2) as set forth in (b) above, if checked. Any reply received by the Office later than three months after the mailing date of the final rejection, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

1. ☐ A Notice of Appeal was filed on _____. Appellant's Brief must be filed within the period set forth in 37 CFR 1.192(a), or any extension thereof (37 CFR 1.191(d)), to avoid dismissal of the appeal.
2. ☒ The proposed amendment(s) will not be entered because:
- (a) ☒ they raise new issues that would require further consideration and/or search (see NOTE below);
- (b) ☐ they raise the issue of new matter (see Note below);
- (c) ☐ they are not deemed to place the application in better form for appeal by materially reducing or simplifying the issues for appeal; and/or
- (d) ☐ they present additional claims without canceling a corresponding number of finally rejected claims.

NOTE: See Continuation Sheet.

3. ☐ Applicant's reply has overcome the following rejection(s): _____.
4. ☐ Newly proposed or amended claim(s) _____ would be allowable if submitted in a separate, timely filed amendment canceling the non-allowable claim(s).
5. ☒ The a) ☐ affidavit, b) ☐ exhibit, or c) ☒ request for reconsideration has been considered but does NOT place the application in condition for allowance because: See Continuation Sheet.
6. ☐ The affidavit or exhibit will NOT be considered because it is not directed SOLELY to issues which were newly raised by the Examiner in the final rejection.
7. ☒ For purposes of Appeal, the proposed amendment(s) a) ☒ will not be entered or b) ☐ will be entered and an explanation of how the new or amended claims would be rejected is provided below or appended.

The status of the claim(s) is (or will be) as follows:


Claim(s) allowed: _____.

Claim(s) objected to: 11,13-15,17-19,22 and 24-26.

Claim(s) rejected: 1-3,7,8,10,11,13-15 and 17-26.

Claim(s) withdrawn from consideration: _____.

8. ☒ The drawing correction filed on 10 November 2003 is a) ☒ approved or b) ☐ disapproved by the Examiner.
9. ☐ Note the attached Information Disclosure Statement(s)(PTO-1449) Paper No(s). _____.
10. ☒ Other: See Continuation Sheet


John Ruggles
Examiner
Art Unit 1756

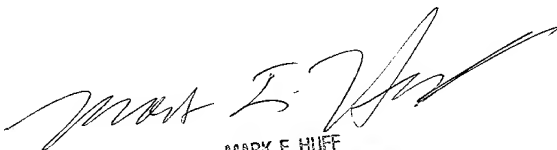
Continuation of 2. NOTE: the proposed amendment was not entered because amended claim 15 and new claim 27 raise new issues that would require further consideration by specifically reciting that the first ARC layer (etching stop layer) 28 material is selected from silicon oxynitride and titanium nitride, but titanium nitride is only specifically supported by the original specification at paragraphs 0035-0037 for the second ARC layer 26, the titanium nitride being preferable when using an I-line exposure source.

Continuation of 5. does NOT place the application in condition for allowance because: the proposed amendment was not entered as noted above and applicants' remarks beginning on page 12 of the response filed 10 November 2003 have not been deemed persuasive. It would have been obvious to one of ordinary skill in the art at the time the invention was made to have combined the teachings of Lin with those of Yu and Filipiak because all these references relate to the same art of semiconductor device manufacture for the purpose of reducing undesirable reflectance by using one or more ARC layer(s) to avoid reflective notching of an overlying photoresist layer during patterning. The combined process includes applying at least one thin conformal ARC layer to the sidewalls of holes or openings without filling the holes or openings before patterning an overlying photoresist layer to avoid reflective notching of the photoresist. Therefore, this combination of teachings provides a solution to the same problem of the instant claims, and in a similar manner.

Continuation of 10. Other: Applicants have not fully addressed all grounds of objection restated in the previous Office action mailed out 11 September 2003 (e.g., namely that applicants have still not responded to objections to the original specification in paragraphs 008, 0010, and 0015, etc.).



John Ruggles
Examiner
Art Unit 1756



MARK F. HUFF
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 1700